

**DECISION
AND
FINDING OF NO SIGNIFICANT IMPACT**

**ENVIRONMENTAL ASSESSMENT: REDUCING PIGEON, STARLING, HOUSE SPARROW,
BLACKBIRD, RAVEN, AND CROW DAMAGE THROUGH AN INTEGRATED WILDLIFE
DAMAGE MANAGEMENT PROGRAM IN THE STATE OF MAINE**

**United States Department of Agriculture
Animal and Plant Health Inspection Service
Wildlife Services**

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I. INTRODUCTION

The United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Wildlife Services (WS) program prepared an Environmental Assessment (EA) to analyze the potential environmental and social effects of resolving damage to property, agricultural commodities, natural resources, and threats to human safety associated with rock pigeons (feral pigeons) (*Columba livia*), European starlings (*Sturnus vulgaris*), house sparrows (*Passer domesticus*), red-winged blackbirds (*Agelaius phoeniceus*), brown-headed cowbirds (*Molothrus ater*), common grackles (*Quiscalus quiscula*), common ravens (*Corvus corax*), and American crows (*Corvus brachyrhynchos*) in Maine (USDA 2002)¹. The EA documents the need for bird damage management in the State and assesses potential impacts on the human environment of four alternatives to address that need. WS' proposed action in the EA implements an integrated bird damage management program in the State to fully address the need for bird damage management while minimizing impacts to the human environment.

II. PUBLIC INVOLVEMENT

The pre-decisional EA² was made available to the public for review and comment during a 36-day public comment period (November 1, 2001 – December 6, 2001) by a legal notice published on November 1, 2001 in the *Bangor Daily News*. The pre-decisional EA was also mailed directly to organizations with probable interest in the proposed program. No comments on the pre-decisional EA were received during the public involvement process. After consideration of the analysis contained in the EA, a Decision and Finding of No Significant Impact (FONSI) for the EA was issued on January 17, 2002. The Decision and FONSI selected the proposed action which implemented an integrated damage management program in Maine using multiple methods to adequately address the need to manage damage caused by birds.

This summary report and new Decision along with the EA and the 2002 Decision/FONSI will be made available for public review and comment through a legal notice announcing a minimum of a 30-day comment period. The legal notice will be published in the *Kennebec Journal* and posted on the APHIS website located at http://www.aphis.usda.gov/wildlife_damage/nepa.shtml according to WS' public notification requirements (72 FR 13237-13238). This new Decision will also be directly mailed to agencies, organizations, and individuals with probable interest in WS' bird damage management activities. Comments received during the public involvement process will be fully considered for new,

¹Copies of the EA and 2002 Decision/FONSI are available for review from the State Director, USDA/APHIS/WS, 79 Leighton Rd., Suite 12, Augusta, ME 04330 or by visiting the APHIS website at http://www.aphis.usda.gov/wildlife_damage/nepa.shtml.

²After the development of the pre-decisional EA by WS and consulting agencies and after public involvement in identifying new issues and alternatives, WS issues a Decision on the EA. Based on the analyses in the pre-decisional EA after public involvement, a decision is made to either publish a Notice of Intent to prepare an Environmental Impact Statement or to publish a public notice of a Finding of No Significant Impact for the EA in accordance with the NEPA and the Council of Environmental Quality regulations.

substantive issues and alternatives. Unless new substantive issues and/or new alternatives are brought to WS' attention, this new Decision will take effect upon the close of the comment period.

III. PURPOSE

This new Decision and summary report will analyze WS' bird damage management activities in Maine since the 2002 Decision and FONSI were signed for the EA to: 1) facilitate planning and interagency coordination, 2) streamline program management, 3) ensure WS' activities remain within the scope of analyses contained in the EA, and 4) clearly communicate to the public the analysis of individual and cumulative impacts of the current program since 2002. This summary report and new Decision/FONSI ensures WS' actions comply with the National Environmental Policy Act (NEPA), with the Council on Environmental Quality (40 CFR 1500), and with APHIS' NEPA implementing regulations (7 CFR 372). All bird damage management activities, including disposal requirements, are conducted consistent with: 1) the Endangered Species Act of 1973, 2) the Migratory Bird Treaty Act, 3) Executive Order (EO) 12898³, EO 13045⁴, EO 13112⁵, and EO 13186⁶, 4) the Federal Insecticide, Fungicide, and Rodenticide Act, and 5) federal, state, and local laws, regulations, and policies.

IV. MONITORING

The WS program in Maine annually reviews program activities to determine impacts on issues identified to ensure that program activities are within the scope of analysis contained in the EA. The annual monitoring reports document WS' activities while discussing any new information that becomes available since the completion of the EA and the last monitoring report. If WS' activities, as identified in the annual monitoring reports, are outside the scope of the analyses in the EA or if new issues are identified from available information, further analysis would occur and the EA would be supplemented to the degree as identified by those processes pursuant to NEPA or a notice of intent to prepare an Environmental Impact Statement (EIS) would occur.

This summary report and new Decision will evaluate WS' activities to resolve and prevent damage caused by starlings, pigeons, house sparrows, red-winged blackbirds, common grackles, brown-headed cowbirds, common ravens, and American crows in Maine under the proposed action described in the EA since the Decision and FONSI were signed in 2002. WS will continue to coordinate activities to alleviate or prevent damage with the Maine Department of Inland Fisheries and Wildlife (MDIFW) and the United States Fish and Wildlife Service (USFWS) to ensure WS' activities are considered as part of the management objectives for those species. WS will also continue to provide the number of birds taken during WS' activities to the USFWS and to the MDIFW to ensure the magnitude of take by WS is within allowable harvest levels in Maine.

³ Executive Order 12898 promotes the fair treatment of people of all races, income levels and cultures with respect to the development, implementation and enforcement of environmental laws, regulations and policies.

⁴ Executive Order 13045 ensures the protection of children from environmental health and safety risks since children may suffer disproportionately from those risks.

⁵ Executive Order 13112 states that each Federal agency whose actions may affect the status of invasive species shall, to the extent practicable and permitted by law; 1) reduce invasion of exotic species and the associated damages, 2) monitor invasive species populations, provide for restoration of native species and habitats, 3) conduct research on invasive species and develop technologies to prevent introduction, and 4) provide for environmentally sound control, promote public education on invasive species.

⁶ Executive Order 13186 directs federal agencies to protect migratory birds and strengthen migratory bird conservation by identifying and implementing strategies that promote conservation and minimize the take of migratory birds through enhanced collaboration between WS and the USFWS, in coordination with state, tribal, and local governments. A National-level MOU between the USFWS and WS is being developed to facilitate the implementation of Executive Order 13186.

V. RELATIONSHIP OF THIS DOCUMENT TO OTHER ENVIRONMENTAL DOCUMENTS

WS' Programmatic Final Environmental Impact Statement: WS has developed a programmatic Final Environmental Impact Statement (FEIS)⁷ that addresses the need for wildlife damage management in the United States (USDA 1997). The FEIS contains detailed discussions of potential impacts to the human environment from wildlife damage management methods used by WS. Information from WS' programmatic FEIS has been incorporated by reference into the EA along with this summary report and new Decision.

VI. AFFECTED ENVIRONMENT

The proposed action could be conducted on private, federal, state, tribal, and municipal lands in Maine to resolve damage to agricultural commodities, natural resources, property, and to reduce threats to public health and safety. The affected environment includes, but is not necessarily limited to, areas in and around buildings and parks, bridges, industrial sites, urban/suburban woodlots, and airport hangars, where pigeons, starlings, sparrows, and blackbirds may roost, loaf, or nest. Damage management activities may also be conducted at agricultural fields, vineyards, orchards, farmyards, grain mills, and grain handling areas (e.g., railroad yards) where pigeons, starlings, sparrows and/or blackbirds destroy crops, feed on spilled grains, or contaminate food products for human or livestock consumption. Additionally, the area of the proposed action would include airports and surrounding property where pigeons, starlings, sparrows, and blackbirds represent a threat to aviation safety.

WS has reviewed the affected environment during evaluations of program activities under the proposed action through annual monitoring reports and this summary report. The affected environment has not changed since the implementation of the proposed action and continues to be as addressed in the EA.

VII. MAJOR ISSUES

Issues are concerns of the public and/or professional community raised regarding potential adverse affects that might occur from a proposed action. Such issues must be considered in the NEPA decision-making process. Issues relating to the reduction of wildlife damage were raised during the scoping process for WS' programmatic FEIS (USDA 1997) and were considered in the preparation of the EA (USDA 2002). Issues related to managing damage associated with pigeon, starling, house sparrow, and blackbird damage management were developed by WS in consultation with the USFWS, the MDIFW, and the Maine Department of Agriculture. The pre-decisional EA and Decision were also made available to the public for review and comment to identify additional issues.

The EA fully describes the issues identified during the scoping process for WS' programmatic FEIS and during the development of the EA. For this summary report and new Decision, the issues analyzed in the EA are summarized and related to activities conducted since the 2002 Decision was signed. The following issues were identified as important to the scope of the analysis (40 CFR 1508.25):

Issue 1 – Effects on target bird species

A common issue when addressing damage caused by wildlife are the potential impacts of management actions on the population of target species. Methods used to resolve damage can involve altering the behavior of target species and may require the use of lethal methods when appropriate. Under the proposed action, WS provided technical and direct damage assistance using methods described in

⁷Copies of WS' programmatic FEIS are available from USDA/APHIS/WS Operational Support Staff, 4700 River Road, Unit 87, Riverdale, MD 20737-1234.

Appendix B of the EA in an integrated approach in which all or a combination of methods were employed to resolve a request for assistance (USDA 2002).

WS continued to provide both technical assistance and direct damage management as part of an integrated damage management approach to preventing and resolving damage caused by pigeons, starlings, house sparrows, and blackbirds in Maine from federal fiscal year (FY)⁵ 2002 through FY 2008. Technical assistance was provided to cooperators through the dissemination of information regarding damage management techniques to prevent damage, through methods demonstrations, and through site visits. Through technical assistance, WS made recommendations on the appropriate methods available for use that a requestor could employ to resolve damage or reduce threats without WS' direct involvement.

Operational assistance occurs when WS is directly involved with employing methods to resolve, alleviate, or reduce threats. As directed by the selected alternative, WS applies multiple methods as part of an integrated damage management program to resolve requests for assistance. WS' technical assistance and direct operational programs are also discussed in the EA (USDA 2002) and in WS' programmatic FEIS (USDA 1997).

The integrated approach of managing damage associated with pigeons, starlings, house sparrows, and blackbirds uses both non-lethal and lethal methods to resolve requests for assistance. Although non-lethal methods can disperse birds from areas where application of those methods occurs, those birds are generally unharmed. Therefore, no adverse affects are often associated with the use of non-lethal methods. However, methods used to lethally take pigeons, starlings, house sparrows, and blackbirds can result in local reductions in those species' populations in the area where damage or threats of damage were occurring. Rock pigeons, European starlings, and house sparrows are non-native species to North America and are afforded no protection under the Migratory Bird Treaty Act. Rock pigeons are not protected by State law and regulations (Maine Revised Statute Title 12, § 12404). European starlings and house sparrows are allowed to be taken by hunting according to State law and regulations (Maine Revised Statute Title 12, § 11851). Red-winged blackbirds, brown-headed cowbirds, common grackles, common ravens, and American crows are afforded protection from take (killing) under the Migratory Bird Treaty Act. Normally, authorized take of those bird species afforded protection under the Migratory Bird Treaty Act can only occur after issuance of a depredation permit issued by the USFWS pursuant to the Act. However, when red-winged blackbirds, brown-headed cowbirds, common grackles, and American crows are found committing or about to commit damage to resources or posing a threat to human safety, take can occur without a depredation permit under a Depredation Order (50 CFR 21.43). Take of blackbirds by WS occurs pursuant to the Depredation Order in Maine.

WS' activities to address damage caused by pigeons, starlings, house sparrows, and blackbirds using an integrated approach to resolve requests for assistance from FY 2002 through FY 2008 are summarized by FY below:

WS' Bird Damage Management Activities in Maine during FY 2002

WS received requests for assistance to manage damage and threats associated with birds during FY 2002 in Maine. Damage and threats occurred primarily from accumulations of fecal droppings under roosting areas that can damage property and pose a risk to human safety where fecal matter occurs in public-use areas. Fecal droppings are also aesthetically displeasing and require continual clean-up. WS received requests for assistance to manage damage to residential buildings, non-residential buildings, adult cattle, livestock feed, field corn, sweet corn, and threats to property and human safety associated with birds being struck by aircraft. WS continued to provide both technical and direct operational assistance to those experiencing damage and threats. During FY 2002, WS conducted 18 technical assistance projects involving damage or threats posed by birds in Maine.

To address requests for direct operational assistance, WS employed lethal methods to take 853 rock pigeons using DRC-1339 and 143 pigeons using spotlights and shooting during FY 2002 to reduce threats to human safety.

WS' Bird Damage Management Activities in Maine during FY 2003

Similar to FY 2002, requests for assistance in FY 2003 were primarily to resolve damage and threats associated with accumulations of fecal droppings under roosting areas that can damage property and pose a risk to human safety where fecal matter occurs in public-use areas. The resources affected as a result of these requests include residential buildings, non-residential buildings, adult cattle, livestock feed, field corn, sweet corn, and human health and safety to aircrafts. Technical assistance was provided to those requesting assistance with bird damage without WS' direct involvement. During FY 2003, WS conducted 30 technical assistance projects involving damage or threats posed by birds in Maine.

To address requests for direct operational assistance, WS employed lethal methods to take a total of 1,131 rock pigeons using DRC-1339 and shooting to lethally take 271 pigeons in FY 2003. To alleviate damage caused by European starlings, WS employed DRC-1339 to lethally take 7,620 starlings in the State during FY 2003. WS also used non-lethal methods to disperse five starlings during FY 2003 to alleviate damage and threats.

WS' Bird Damage Management Activities in Maine during FY 2004

WS continued to provide both technical and operational assistance in FY 2004 to those requesting assistance with managing damage and threats associated with birds in the State. Damages reported and verified by WS in FY 2004 occurred where excessive fecal material accumulated under roosting areas that required constant cleaning, caused economic damage, was aesthetically displeasing, and when accumulations occurred in areas of human activity posed a threat to human safety from disease transmission.

Technical assistance was provided to those interested through the dissemination of handouts and information regarding damage management techniques, species identification, methods demonstrations, and site visits. Through technical assistance, WS made recommendations on the appropriate methods available for use that a requestor can employ to resolve damage or reduce threats without WS' direct involvement. During FY 2004, WS conducted 45 technical assistance projects involving damage or threats posed by birds in Maine.

Operational assistance occurs when WS is directly involved with employing methods to resolve, alleviate, or reduce threats associated with birds. As directed by the selected alternative, WS continued to apply multiple methods as part of an integrated damage management program to resolve requests for assistance in FY 2004. As part of an integrated management program, the WS program in Maine employed lethal methods to take a total of 360 pigeons by shooting and 3,830 pigeons using DRC-1339 in FY 2004. During FY 2004, WS employed firearms to take 39 starlings and employed DRC-1339 to lethally take 14,243 starlings in the State to alleviate damage and threats. In addition, three starlings were taken as unintentional non-targets during FY 2004.

WS' Bird Damage Management Activities in Maine during FY 2005

WS continued to provide both technical and operational assistance in FY 2005 to those requesting assistance with managing damage and threats associated with birds in the State. Damages reported and verified by WS in FY 2005 occurred primarily from accumulations of fecal droppings under roosting areas that can damage property and pose a risk to human safety where fecal matter occurs in public-use

areas. During FY 2005, WS conducted 34 technical assistance projects involving damage or threats posed by birds in Maine.

As part of an integrated management program, the WS program in Maine employed lethal methods to take 372 pigeons using firearms and 838 pigeons using DRC-1339 during FY 2005. WS also employed Avitrol to lethal take 175 house sparrows in the State in FY 2005. In addition, 30,955 European starlings were lethally taken with DRC-1339.

WS' Bird Damage Management Activities in Maine during FY 2006

WS continued to provide both technical and operational assistance in FY 2006 to those requesting assistance with managing damage and threats associated with birds in the State. Damages reported and verified by WS in FY 2006 occurred primarily from accumulations of fecal droppings under roosting areas that can damage property and pose a risk to human safety where fecal matter occurs in public-use areas. Fecal droppings are also aesthetically displeasing and require continual clean-up. During FY 2006, WS conducted 34 technical assistance projects involving damage or threats posed by birds in Maine.

As part of an integrated management program, WS employed lethal methods to take 292 pigeons using firearms and 151 pigeons using DRC-1339 during FY 2006. WS employed DRC-1339 to lethally take 375 starlings during FY 2006 in the State. WS also employed Avitrol to lethally take 12 house sparrows during FY 2006. In addition, 30 house sparrows were dispersed in FY 2006 during the use of Avitrol.

WS' Bird Damage Management Activities in Maine during FY 2007

WS continued to provide both technical and operational assistance in FY 2007 to those requesting assistance with managing damage and threats associated with birds in the State. Damages reported and verified by WS in FY 2007 were similar to previous years and were primarily from accumulations of fecal droppings associated with roosting, loafing, and nesting areas. During FY 2007, WS conducted 30 technical assistance projects involving damage or threats posed by birds in Maine.

During FY 2007, WS employed cage traps and decoys to capture and euthanize by cervical dislocation five American crows and firearms to take 12 crows. WS employed firearms to lethally take 222 pigeons in FY 2007 and DRC-1339 to take six pigeons. In addition, WS employed DRC-1339 to lethally take 1,700 starlings in the State to alleviate damage. WS also dispersed 50 pigeons during FY 2007 to alleviate damage.

WS' Bird Damage Management Activities in Maine during FY 2008

WS continued to provide both technical and operational assistance in FY 2008 to those requesting assistance with managing damage and threats associated with birds in the State. Damages reported and verified by WS in FY 2008 occurred primarily from accumulations of fecal droppings under roosting areas that can damage property and pose a risk to human safety where fecal matter occurs in public-use areas. Fecal droppings are also aesthetically displeasing and require continual clean-up. During FY 2008, WS conducted 7 technical assistance projects involving damage or threats posed by birds in Maine.

As part of an integrated management program, WS employed lethal methods to take a total of 600 house sparrows with Avitrol during FY 2008 in Maine. WS employed DRC-1339 to lethally take 480 rock pigeons in FY 2008 and nine pigeons by shooting. In addition, WS used DRC-1339 to take 100 European starlings. WS employed shooting to take ten American crows and trapping to live-capture and euthanize an additional two crows in Maine in FY 2008.

Pigeon, starling, house sparrow, and blackbird population impact analysis from WS' activities

As discussed in the EA, pigeons, starlings, and house sparrows are all non-native species in North America that often compete with native species for food and nesting habitat (USDA 2002). The communal nesting behavior and roosting behavior of those three species along with the close association of those species with human activities often raises concerns about economic damage to agricultural resources, property, natural resources, and threats to human safety. Therefore, a reduction in populations of those species could be viewed as benefiting the native environment in Maine. Rock pigeons, European starlings, and house sparrows are afforded no protection under the Migratory Bird Treaty Act. Rock pigeons are not afforded any protection by the State. As discussed previously, a Depredation Order allows red-winged blackbirds, common grackles, brown-headed cowbirds, and American crows to be taken without a depredation permit when they are found committing or about to commit damage or posing a safety hazard. All take by WS occurred pursuant to the Migratory Bird Treaty Act and the Depredation Order. WS' take of target birds from FY 2002 through FY 2008 are summarized in Table 1.

Table 1 - Take of birds by the WS' program in Maine from FY 2002 through FY 2008

Fiscal Year	Rock Pigeons	European Starlings	House Sparrows	American Crows
2002	996	0	0	0
2003	1,402	7,620	0	0
2004	4,190	14,282	0	0
2005	1,210	30,955	175	0
2006	443	375	12	0
2007	228	1,700	0	17
2008	489	100	600	12
Total	8,958	55,032	787	29

Of primary concern is the magnitude of take on a species' population from the use of lethal methods. Lethal methods are employed to remove an individual or those individuals responsible for causing damage and only after requests for such assistance are received by WS. The use of lethal methods would therefore result in local population reductions in the area where damage or threats were occurring. The number of target species removed from the population using lethal methods under the proposed action would be dependent on the number of requests for assistance received, the number of individuals involved with the associated damage or threat, and the efficacy of methods employed.

The analysis for magnitude of impact from lethal take generally follows the process described in Chapter 4 of WS' programmatic FEIS (USDA 1997). Magnitude is described in WS' programmatic FEIS as "...a measure of the number of animals killed in relation to their abundance." Magnitude may be determined either quantitatively or qualitatively. Quantitative determinations are based on population estimates, allowable harvest levels, and actual harvest data. Qualitative determinations are based on population trends and harvest data when available. Generally, WS only conducts damage management involving species whose population densities are high and only after they have caused damage. WS' take is monitored by comparing numbers of animals killed with overall populations or trends in populations to assure the magnitude of take is maintained below the level that would cause significant adverse impacts to the viability of native species populations (USDA 1997).

Rock Pigeon Population Impact Analysis

During the development of the EA, WS' average annual take of rock pigeons in Maine was 756 pigeons per year. Based on the potential for an increasing number of requests for assistance to manage damage caused by pigeons, the EA evaluated an annual lethal take of pigeons that would not increase more than

5% above the average take of 756 pigeons per year to resolve requests for assistance to manage damage (USDA 2002). WS' average lethal take of pigeons exceeded this estimate from FY 2002 through FY 2005. This increase in lethal take is not expected to adversely impact local, statewide, or national pigeon populations. WS' highest level of take occurred in FY 2004 when 4,190 pigeons were taken. The Partners in Flight (PIF) landbird population database estimated the pigeon population in Maine to be 120,000 birds (Rich et al. 2004). Trend data from pigeons observed on routes during the Breeding Bird Survey (BBS) indicates the number of pigeons observed in the State during the breeding season has increased an estimated 4.2% annually since 1966 (Sauer et al. 2008). Pigeons in the northeast region of the United States (USFWS Region 5) are showing a downward trend estimated at -0.7% annually since 1966 (Sauer et al. 2008). Throughout the United States the number of pigeons observed during the BBS has declined slightly at an annual rate of -0.5% (Sauer et al. 2008). Pigeons overwintering in Maine have shown a general increasing to stable trend since 1966 according to the Christmas Bird Count (CBC) (National Audubon Society 2002). Take from other sources is currently not known and is not reported by the State nor the USFWS since pigeons are considered a non-native species and reporting of take to the State or the USFWS is not required. Based on the best available population estimate and WS' highest level of pigeon take, take of pigeons by WS in FY 2004 represented nearly 3.5% of the estimated population of pigeons in the State. WS' removal of pigeons occurs where damages are occurring which could result in a reduction of pigeons at localized sites. However, WS' activities are limited and are not adversely affecting populations of pigeons statewide in Maine.

In addition, as stated in the EA, neither federal nor state law affords pigeons protection from take. Any bird damage management activities involving lethal methods by WS for employed to take pigeons would be restricted to isolated, individual sites, or communities. In those cases where rock pigeons are causing damage or are a nuisance, complete removal of the local population would be considered to be a beneficial impact on the human environment since the affected property owner or administrator would request it. Although regional population impacts would be minor, even if significant regional or nationwide reductions would be achieved, this would not be considered an adverse impact on the human environment because the species is not part of native ecosystems.

European Starlings Population Impact Analysis

WS' total take of European starlings in Maine from FY 2002 through FY 2008 was 55,032 starlings. The PIF population database estimated the starling population in Maine to be 710,000 birds (Rich et al. 2004). Trend data from routes surveyed during the BBS indicates starlings are showing a declining population trend in Maine estimated at -2.9% annually since 1966 (Sauer et al. 2008). Regionally (USFWS Region 5), the number of starlings observed on BBS routes have shown a declining trend estimated at -1.7% annually since 1966 (Sauer et al. 2008). Throughout the United States starlings have declined slightly at an annual rate of -0.6% (Sauer et al. 2008). Starlings overwintering in Maine are showing a slightly declining to stable trend since 1966 (National Audubon Society 2002). The highest level of take by WS occurred in FY 2005 when 30,955 starlings were lethally taken to alleviate damage. Based on the best available population information, WS' take of 30,955 starlings represents 4.4% of the estimated population in Maine. WS' take of 30,955 starlings represents 0.00034% of total average mortality of starling populations in the Eastern U.S., which remains within the scope of the EA (USDA 2002). WS' activities to alleviate damage associated with starlings are not adversely affecting starling populations in the State based on the take by WS.

Starlings are a non-native species in North America that are afforded no protection from take by federal law, including the Migratory Bird Treaty Act. Any bird damage management activities involving lethal methods by WS involving starlings would be restricted to isolated, individual sites, or communities. In those cases where European starlings are causing damage or are a threat to human safety, complete removal of the local population would be considered to be a beneficial impact on the human environment

since the affected property owner or administrator would request it. Although regional population impacts would be minor, even if significant regional or nationwide reductions would be achieved, this would not be considered an adverse impact on the human environment because the species is not part of native ecosystems.

House Sparrow Population Impact Analysis

The EA evaluated an annual take of no more than 100 house sparrows in Maine (USDA 2002). WS' lethal take exceeded 100 individuals in FY 2005 and in FY 2008. This increase in lethal take is not expected to adversely impact local, statewide, or national house sparrow populations. WS' highest level of take occurred in FY 2008 when 600 house sparrows were taken. The PIF landbird population database estimated the house sparrow population in Maine to be 80,000 birds (Rich et al. 2004). Trend data from house sparrows observed on routes during the Breeding Bird Survey (BBS) indicates the number of house sparrows observed in the State during the breeding season has decreased an estimated -2.5% annually since 1966 (Sauer et al. 2008). House sparrows in the northeast region of the United States (USFWS Region 5) are showing a downward trend estimated at -2.8% annually since 1966 (Sauer et al. 2008). Throughout the United States house sparrows have declined at an annual rate of -2.6% (Sauer et al. 2008). House sparrows overwintering in Maine have shown a general decreasing trend since 1966 according to the CBC (National Audubon Society 2002). Take from other sources is currently not known and is not reported by the USFWS since house sparrows are considered a non-native species. Based on the best available population estimate and WS' highest level of house sparrow take, take of house sparrows by WS in FY 2008 represented nearly 0.8% of the estimated population of house sparrows in the State. WS' removal of house sparrows occurs where damages are occurring which could result in a reduction of house sparrows at localized sites. However, WS' activities are limited and are not adversely affecting populations of house sparrows statewide in Maine.

Similar to starlings and pigeons, house sparrows are a non-native species in North American and are afforded no protection under the Migratory Bird Treaty Act. Although regional population impacts would be minor, even if significant regional or nationwide reductions would be achieved, this would not be considered an adverse impact on the human environment because the species is not part of native ecosystems.

American Crow Population Impact Analysis

The EA evaluated an annual take of no more than 1,000 American crows in Maine (USDA 2002). WS' annual take from FY 2002 through FY 2008 was within the level of take analyzed in the EA. Only 29 American crows were lethally taken by WS in Maine in this time period. Crows can also be taken during a regulated harvest season in the State. During the regulated hunting season for crows in the State, which lasts 120 days, an unlimited number of crows can be harvested. The number of crows harvested in the State during the regulated harvest season is currently unknown. As stated previously, crows can also be taken without a depredation permit under the Depredation Order when found committing or about to commit damage to resources or posing a risk to human safety. Take of crows under the Depredation Order are currently not required to be reported to the USFWS. Therefore, the number of crows taken under the depredation order is also currently unknown. The PIF population database estimated the crow population in Maine to be 270,000 birds (Rich et al. 2004). BBS trend data from 1966 to 2007 indicates the number of American crows observed during the breeding season in Maine is showing an increase estimated at 1.1% annually (Sauer et al. 2008). Regionally, the number of crows observed during the BBS is showing a statistically significant increase estimated at 0.7% annually since 1966 (Sauer et al. 2008). Throughout the United States, American crows have increased at an annual rate of 0.8% since 1966 (Sauer et al. 2008). The number of crows observed wintering in Maine have shown a general stable to increasing trend since 1966 (National Audubon Society 2002). WS' highest take of crows in one year

was FY 2007 when 17 birds were taken which represents 0.006% of the estimated population in the State. WS' limited take of crows annually has not adversely affected crow populations in the State.

Population Impact Analysis for Other Blackbird Species

No take of red-winged blackbirds, common grackles, common ravens, or brown-headed cowbirds has occurred by WS in Maine from FY 2002 through FY 2008.

WS' activities to alleviate damage or threats associated with pigeons, starlings, sparrows, and blackbirds have not changed from those analyzed in the EA. WS' take from FY 2002 through FY 2008 of pigeons, starlings, crows, and house sparrows was within the scope analyzed in the EA except as address in previous sections (USDA 2002). Although trending data for some of the species addressed by WS to alleviate damage are showing declines, WS' activities do not result in wide-scale removal of those species. Therefore, the magnitude of WS' take is low when compared to the overall populations of those species. However, any decline in populations of pigeons, house sparrows, and starlings could be considered as benefiting native wildlife through a reduction in competition for resources. The magnitude of take by WS on pigeon, starling, sparrow, American crow, common raven, and blackbird populations will continue to be minor and will not threaten the viability of those species' populations.

Issue 2 - Effects on other wildlife species, including T&E species

The issue of non-target species effects, including effects on threatened and endangered species arises from the use of non-lethal and lethal methods identified in the alternatives. The use of non-lethal and lethal methods has the potential to inadvertently disperse, capture, or kill non-target wildlife. WS' minimization measures and Standard Operating Procedures are designed to reduce the effects of damage management activities on non-target species' populations which were discussed in the EA (USDA 2002). To reduce the risks of adverse affects to non-target wildlife, WS selects damage management methods that are as target-selective as possible or applies such methods in ways that reduces the likelihood of capturing non-target species. Before initiating management activities, WS also selects locations which are extensively used by the target species and employs baits or lures which are preferred by those species. Despite WS' best efforts to minimize non-target take during program activities, the potential for adverse affects to non-targets exists when applying both non-lethal and lethal methods to manage damage or reduce threats to human safety.

Non-lethal methods have the potential to cause adverse affects on non-targets primarily through exclusion, harassment, and dispersal. Any exclusionary device erected to prevent access of target species also potentially excludes species that are not the primary reason the exclusion was erected. Therefore, non-target species excluded from areas may potentially be adversely impacted if the area excluded is large enough. Auditory and visual dispersal methods used to reduce damage or threats caused by target species are also likely to disperse non-targets in the immediate area the methods are employed. Therefore, non-targets may be dispersed from an area while employing non-lethal dispersal techniques. However, like target species, the potential impacts on non-target species are expected to be temporary with target and non-target species often returning after the cessation of dispersal methods.

The lethal take of non-targets from using those methods described in the EA is unlikely with take never reaching a magnitude that a negative impact on populations would occur. Any potential non-targets live-captured using non-lethal methods would be handled in such a manner as to ensure the survivability of the animal if released. The potential adverse affects associated with non-lethal methods are negligible and, in the case of exclusion and harassment methods, often temporary. The use of firearms is selective for target species since animals are identified prior to application; therefore, no adverse impacts are anticipated from the use of those methods. The use of chemical methods, when used according to label directions,

poses minimal hazards to non-target wildlife (USDA 1997).

While every precaution is taken to safeguard against taking non-targets during operational use of methods and techniques for resolving damage and reducing threats caused by wildlife, the use of such methods can result in the incidental take of unintended species. Those occurrences are minimal and should not affect the overall populations of any species. WS' take of non-target species during activities to reduce damage or threats to human safety caused by pigeons, starlings, sparrows, and blackbirds is expected to be extremely low to non-existent. WS will continue to monitor annually the take of non-target species to ensure program activities or methodologies used do not adversely impact non-targets. WS' activities are not likely to adversely affect the viability of any wildlife populations from damage management activities.

The EA concluded that WS' damage management activities would have no adverse affects on other wildlife species (non-target), including threatened and endangered species throughout the State when those activities were conducted within the scope analyzed in the EA. As discussed in Issue 1, the primary methods used during direct operational assistance by WS from FY 2002 through FY 2008 to resolve requests for assistance were DRC-1339, shooting with firearms, Avitrol, and trapping. No take of non-target species is known to have occurred from WS' activities to resolve requests for assistance from FY 2002 through FY 2008 and no adverse affects were noted or brought to WS' attention from the use of any methods employed by WS.

Threatened & Endangered (T&E) Species: A review of T&E species listed by the USFWS, the National Marine Fisheries Service (NMFS), and the MDIFW showed that additional listings have occurred since the completion of the EA. Those species listed since the completion of the EA include the American burying beetle (*Nichrophorus americanus*), Eskimo curlew (*Numenius borealis*), gray wolf (*Canis lupis*), Sei whale (*Balaenoptera borealis*), sperm whale (*Physeter catodon*), right whale (*Balaena glacialis*), loggerhead turtle (*Caretta caretta*) and Atlantic ridley turtle (*Lepidochelys kempi*).

Based on WS' activities described in the EA, WS has determined that program activities to manage damage caused by pigeons, starlings, sparrows, and blackbirds will have no effect on those species listed as threatened or endangered by the USFWS and/or the NMFS since the Decision/FONSI was signed for the EA. The American burying beetle, Eskimo curlew, and the gray wolf are currently listed in Maine but are not known to occur in the State. The Sei whale, sperm whale, right whale, loggerhead turtle, and the Atlantic ridley turtle are likely to be found along the coastal areas of the State. WS' activities to resolve damage or threats associated with pigeons, starlings, sparrows, and blackbirds are not those that cause major disturbances to habitat or the introduction of pollutants into the waters where those species are known to occur. Therefore, WS' activities will have no effect on those species in the State.

WS' program activities in Maine to manage damage caused by pigeons, starlings, sparrows and blackbirds has not changed from those described in the EA. Thus, WS' determination for those T&E species addressed in the EA is still valid and appropriate for the proposed action (USDA 2002). Program activities and their potential impacts on other wildlife species, including T&E species have not changed from those analyzed in the EA. Impacts of the program on this issue are expected to remain insignificant.

Issue 3 - Effects on public health and safety

Management activities conducted by WS to resolve damage or threats associated with pigeons, starlings, sparrows, and blackbirds have not resulted in any injuries or illness to any members of the public or to WS' personnel. WS' activities had a positive impact in those situations that reduced the risks of potential injury, illness, and loss of human life from injurious bird species associated with aircraft strikes and diseases transmission. The EA concluded that an integrated approach to wildlife damage management

had the greatest potential of successfully reducing potential risks to human health and safety.

Program activities and methods, and their potential impacts on human health and safety have not changed from those analyzed in the EA. Impacts of the program on this issue are expected to remain insignificant.

Issue 4 - Impacts to stakeholders, including aesthetics

As analyzed in the EA, WS would employ methods when requested that would result in the dispersal, exclusion, or removal of individuals or small groups of pigeons, starlings, blackbirds, and sparrows to resolve damage and threats. In some instances where individuals of those species are dispersed or removed, the ability of interested persons to observe and enjoy those individuals would likely decline temporarily. The presence of pigeons, starlings, sparrows, and blackbirds in areas where those individuals were dispersed will likely increase upon cessation of damage management activities.

Even the use of exclusionary devices can lead to the dispersal of birds if the resource being damaged was acting as an attractant. Thus, once the attractant has been removed or made unavailable, birds will likely disperse to other areas where resources are more vulnerable.

The use of lethal methods would result in temporary declines in local populations resulting from the removal of those birds responsible for causing damage. WS' goal is to respond to requests for assistance and to manage only those birds responsible for the resulting damage. Therefore, the removal of birds would result in localized declines depending on the number of birds removed and population densities in surrounding areas. However, the overall populations of those target species would not be impacted. Based on the localized decline in the presence of birds, the EA concluded the effects on aesthetics would be variable depending on the stakeholders' values towards wildlife. However, the ability to view and enjoy pigeons, starlings, sparrows, and blackbirds in the State would still remain if a reasonable effort is made to locate those species outside the area in which damage management activities occurred.

Conflicts with pigeons, starlings, sparrows, and blackbirds were reduced at each location that WS provided direct management assistance thereby improving the aesthetic values of affected properties. Program activities and methods and their potential impacts on aesthetics have not changed from those analyzed in the EA. Impacts of the program on aesthetics are expected to remain insignificant.

Issue 5 – Humaneness and animal welfare concerns of methods used

As analyzed in the EA, humaneness, in part, appears to be a person's perception of harm or pain inflicted on an animal. People may perceive the humaneness of an action differently. The challenge in coping with this issue is how to achieve the least amount of animal suffering.

Some individuals believe any use of lethal methods to resolve damage associated with wildlife is inhumane because the resulting fate is the death of the animal. Others believe that certain lethal methods can lead to a humane death. Others believe most non-lethal methods of capturing wildlife to be humane because the animal is generally unharmed and alive. Still others believe that any disruption in the behavior of wildlife is inhumane. With the multitude of attitudes on the meaning of humaneness, the analyses must consider the most effective way to address damage and threats caused by wildlife in a humane manner. WS is challenged with conducting activities and employing methods that are perceived to be humane while assisting those persons requesting assistance to manage damage and threats associated with wildlife. The goal of WS is to use methods as humanely as possible to effectively resolve requests for assistance to reduce damage and threats to human safety. WS continues to evaluate methods and activities to minimize the potential pain and suffering of those methods when attempting to resolve requests for assistance.

As mentioned previously, some methods have been stereotyped as “humane” or “inhumane”. However, many “humane” methods can be inhumane if not used appropriately. For instance, a cage trap is generally considered by most members of the public as “humane”. Yet, without proper care, live-captured wildlife in a cage trap can be treated inhumanely if not attended to appropriately.

Therefore, WS’ mission is to effectively address requests for assistance using methods in the most humane way possible that minimizes the stress and pain of the animal. WS’ personnel are experienced and professional in their use of management methods and methods are applied as humanely as possible.

The EA concluded that the methods used by WS to manage damage caused by pigeons, starlings, house sparrows, and blackbirds are relatively humane, but that some persons will view some methods used as inhumane. WS will continue to adhere to minimization measures and protocols discussed in the EA (USDA 2002) and WS’ programmatic FEIS (USDA 1997) to ensure methods and techniques to resolve damage and threats are employed as humanely as possible. Impacts of the program on humaneness and animal welfare are expected to remain insignificant.

VIII. ISSUES NOT CONSIDERED IN DETAIL

WS has reviewed the issues not considered in detail as described in the EA and has determined that the analysis provided in the EA has not changed and is still appropriate. Effects on those issues continue to be insignificant.

IX. ALTERNATIVES ANALYZED IN DETAIL

The following four alternatives were developed in response to the issues identified in the EA and through public involvement:

- Alternative 1: Integrated Bird Damage Management Program (Proposed Action/No Action)
- Alternative 2: Non-lethal Bird Damage Management Only by WS
- Alternative 3: Technical Assistance Only
- Alternative 4: No Federal WS Bird Damage Management

The EA contains a detailed description and discussion of the alternatives and the effects of the alternatives on the issues identified (USDA 2002). Appendix B of the EA provides a description of the methods that could be used or recommended by WS under each of the alternatives. WS has reviewed the alternatives analyzed and determined the analyses in the EA are still appropriate for those alternatives.

X. ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL

Several alternatives were also considered to address the issues but were not analyzed in detail with the rationale discussed in the EA (USDA 2002). WS has reviewed the alternatives analyzed but not in detail and determined the analyses in the EA are still appropriate for those alternatives considered.

XI. ADDITIONAL PIGEON DAMAGE MANAGEMENT METHODS

Since the completion of the EA, a product with the reproductive inhibitor known as nicarbazin has been registered for use in Maine to manage pigeon populations by reducing the likelihood that eggs laid by pigeons will hatch. Nicarbazin is a complex of two compounds, 4,4'-dinitrocarbanilide (DNC) and 4,6-dimethyl-2-pyrimidinol (HDP) which interferes with the formation of the vitelline membrane that

separates the egg yolk and egg white which prevents the development of an embryo inside the egg (EPA 2005). The active component of nicarbazin is the DNC compound with the HDP compound aiding in absorption of DNC (EPA 2005). Nicarbazin was first developed to treat coccidiosis⁸ outbreaks in broiler chickens and has been approved as a veterinary drug by the Food and Drug Administration (FDA) since 1955 for use in chicken feed to prevent the fungal disease coccidiosis (EPA 2005).

Nicarbazin, as a reproductive inhibitor for pigeons, has been registered with the Environmental Protection Agency (EPA) as a pesticide pursuant to the Federal Insecticide, Fungicide, Rodenticide Act under the trade name OvoControl[®] P (Innolytics, LLC, Rancho Santa Fe, CA). OvoControl[®] P (EPA Reg. No. 80224-1) is a restricted use pesticide registered for use in Maine for reducing the egg hatch of urban pigeons. The formulation for pigeons contains 0.5% of the active ingredient nicarbazin by volume as a ready-to-use bait for pigeons in urban areas only. Urban areas have been defined by the EPA as municipalities and surrounding areas with a population of 50,000 or more people. Baiting can only occur by applicators certified by the State and only on rooftops or other flat paved or concrete surfaces such as buildings, office parks, malls, hospitals, bridges, airports, tunnels, and commercial sites.

Since OvoControl[®] P is commercially available to those with a certified applicators license, the use of the product could occur under any of the alternatives discussed in the EA and therefore, the effects of the use would be similar across all the alternatives. Under the proposed action, WS could use or recommend nicarbazin under the trade name OvoControl[®] P as part of an integrated approach to managing damages associated with pigeons. WS' use of nicarbazin under the proposed action would not be additive since the use of the product could occur from other sources, such as private pest management companies or those experiencing damage could become a certified applicator and apply the bait themselves.

Population management from the use of reproductive inhibitors occurs through a reduction in the recruitment of new birds into the population by limiting reproductive output. A reduction in the population occurs when the number of birds being recruited into the population can not replace those individuals that die from other causes each year which equates to a net loss in the number of individuals in the population leading to a reduction in the population. Although not generally considered a lethal method since no direct take occurs, reproductive inhibitors can result in the reduction of a target species' population. WS' use or recommendation of nicarbazin would target local pigeon populations identified as causing damage or threatening human safety. Although a reduction in pigeon populations would likely occur from constant use of nicarbazin, the actual reduction in the population annually would be difficult to derive prior to the initiation of the use of nicarbazin.

One of the difficulties in calculating an actual reduction in a targeted population prior to application of the bait is that consumption of nicarbazin treated bait as currently formulated does not appear to completely eliminate egg hatch in pigeons. Current studies on nicarbazin as a reproductive inhibitor for pigeons has shown variability in hatch rates of pigeons fed treated baits. In addition, pigeons must consume bait treated with nicarbazin daily in the correct dosage throughout the breeding season to achieve the highest level of effectiveness in reducing egg hatch. Pigeons can breed year-around with peak breeding occurring from February through October (Johnston 1992). Giunchi et al. (2007) found that when pigeons were fed treated baits (800 parts per million (ppm)) the number of hatchlings produced declined between 13% and 48% compared to a control group. When pigeons were fed doses of nicarbazin treated bait daily in cage studies at the levels currently found in OvoControl[®] P (5,000 ppm), Avery et al. (2008) found that the rate of egg hatch was reduced by 59% in captive pigeons. In simulating a 50% reduction in egg hatch, Giunchi et al. (2007) predicted through modeling that a population of 5,000 pigeons would be reduced by half if a 50% reduction in pigeon egg hatch occurred annually over a five-year period. The same

⁸Coccidiosis is a fungal pathogen known to infect birds and livestock causing diarrhea, dehydration, and can prevent proper growth of livestock. For more information on coccidiosis, see the EA (USDA 2000).

population would rebound back to 5,000 individuals within five years if egg hatch returned to normal.

Since the effects of nicarbazin on egg hatch are reversible if no longer provided for consumption (Avery et al. 2006, Giunchi et al. 2007, Avery et al. 2008), the reduction in the local pigeon population from the use of nicarbazin can be maintained at appropriate levels where damages or threats are resolved by increasing or decreasing the amount of nicarbazin treated bait available to target pigeons. Although localized pigeon populations would likely be reduced from the use of nicarbazin, the extent of the reduction would be variable given the uncertainty in effectiveness of nicarbazin to reduce egg hatch in pigeons. When pigeons were provided nicarbazin in cage trials at dosage levels found formulated in OvoControl® P (5,000 ppm), not all eggs laid were infertile with 41% of the eggs producing apparently healthy chicks (Avery et al. 2008).

Label requirements of OvoControl® P restrict the application of the product to urban areas where treated bait can be placed on rooftops or other flat, concrete surfaces which further limits the extent of the products use for reducing pigeon populations. Based on current information, WS' use or recommendation of nicarbazin formulated under the trade name OvoControl® P will not adversely affect pigeon populations in Maine since WS' activities will not be additive to those activities that could occur in the absence of WS' use of the product. The resultant reduction in the pigeon population from the use of nicarbazin would be highly variable given the variability in the effectiveness of the product to reduce egg hatch in pigeons. However, given that the effects of nicarbazin are only temporary if birds are not fed an appropriate dose of nicarbazin daily, the reduction in the population could be fully reversed if treated bait is no longer supplied and other conditions (e.g., food, disease) are favorable for population growth. As discussed previously, any reduction in local pigeon populations could be viewed as benefitting other native wildlife since pigeons can compete with native bird species for food and shelter.

The potential adverse affects to non-target wildlife are also a concern from the use of nicarbazin to manage pigeon populations. Exposure of non-target wildlife to nicarbazin could occur either from direct ingestion of the bait by non-target wildlife or from secondary hazards associated with wildlife consuming birds that have eaten treated bait. Several label restrictions of OvoControl® P are intended to mitigate risks to non-target wildlife from direct consumption of treated bait (EPA 2005). Daily observation of bait sites for pigeon and non-target activity must occur during a five to fourteen day acclimation period. The required acclimation period habituates pigeons to feeding in one location at a certain time period. Once pigeons are acclimated and no non-targets are observed feeding on the bait, observations for non-targets must occur once weekly until application of treated bait ends. During the observation periods, the applicator must be present on site until all bait has been consumed. Non-target risks are further minimized by requirements that bait only be placed on rooftops in urban areas and if not practical, baiting is limited to paved and/or on hard concrete surfaces. All unconsumed bait must also be retrieved daily which further reduces threats of non-target consuming treated bait.

In addition, nicarbazin is only effective in reducing the hatch of eggs when blood levels of DNC are sufficiently elevated in a bird species. When consumed by birds, nicarbazin is broken down into the two base components of DNC and HDP which are then rapidly excreted. To maintain the high blood levels required to reduce egg hatch, birds must consume nicarbazin daily at a sufficient dosage that appears to be variable depending on the bird species (Yoder et al. 2005, Avery et al. 2006). For example, to reduce egg hatch in Canada geese (*Branta canadensis*), geese must consume nicarbazin at 2,500 ppm compared to 5,000 ppm required to reduce egg hatch in pigeons (Avery et al. 2006, Avery et al. 2008). In pigeons, consuming nicarbazin at a rate that would reduce egg hatch in Canada geese did not reduce the hatchability of eggs in pigeons (Avery et al. 2006). With the rapid excretion of the two components of nicarbazin (DNC and HDP) in birds, non-targets birds would have to consume nicarbazin daily at sufficient doses to reduce the rate of egg hatching.

Secondary hazards also exist from wildlife consuming pigeons that have ingested nicarbazin. As

mentioned previously, once consumed, nicarbazin is rapidly broken down into the two base components DNC and HDP. DNC is the component of nicarbazin that limits egg hatchability while HDP only aids in absorption of DNC into the bloodstream. DNC is not readily absorbed into the bloodstream and requires the presence of HDP to aid in absorption of appropriate levels of DNC. Therefore, to pose a secondary hazard to wildlife, ingestion of both DNC and HDP from a pigeon carcass would have to occur and HDP would have to be consumed at a level to allow for absorption of the DNC into the bloodstream. In addition, an appropriate level of DNC and HDP would have to be consumed from a pigeon carcass daily to produce any negative reproductive affects to other wildlife since current evidence indicates a single dose does not limit reproduction. To be effective nicarbazin (both DNC and HDP) must be consumed daily during the duration of the reproductive season to limit the hatchability of eggs. Therefore, to experience the reproductive affects of nicarbazin, a pigeon that had consumed nicarbazin would have to be consumed daily and a high enough level of DNC and HDP would have to be available in the pigeon carcass and consumed for reproduction to be affected. Based on the risks and likelihood of wildlife consuming a treated pigeon daily and receiving the appropriate levels of DNC and HDP daily to negatively impact reproduction, secondary hazards to wildlife from the use of nicarbazin are extremely low (EPA 2005).

Although some risks to other non-target species besides bird species does occur from the use of OvoControl® P, those risks are likely to be minimal given the restrictions on where bait can be applied (e.g., on rooftops, on pavement at airports). Although limited toxicological information for nicarbazin exists for wildlife species besides certain bird species, available toxicology data indicates nicarbazin is relatively non-toxic to other wildlife species (World Health Organization 1998, EPA 2005, California Department of Pesticide Regulation 2007). Given the use restriction of OvoControl® P and the limited locations where bait can be applied, the risks of exposure to non-targets would be extremely low.

WS has reviewed the list of threatened and endangered species listed in Maine and determined that the use of nicarbazin under the trade name OvoControl® P will have no effect on those species listed in the State. Restricting the use of the product to use on rooftops and paved concrete areas where pigeons are conditioned to feed along with the bait-type (pellets) of the product and the limited availability of the product during application ensures the use of nicarbazin will have no effect on threatened and endangered species. WS' will continue to monitor pigeon damage management activities and those species listed in the State to ensure compliance with the Endangered Species Act.

Threats to human safety from the use of OvoControl® P will likely be minimal if labeled directions are followed. The use pattern of OvoControl® P will also ensure threats to public safety are minimal. Label requirements require treated bait to be applied on rooftops of buildings or other areas restricted to public access (e.g., airports). The EPA has characterized OvoControl® P as a moderate eye irritant. The FDA has established a tolerance of nicarbazin residues of 4 parts per million allowed in uncooked chicken muscle, skin, liver, and kidney (21 CFR 556.445). The EPA characterized the risks of human exposure as low for a similar product used to reduce egg hatch in Canada geese. The EPA also concluded that if human consumption occurred, a prohibitively large amount of nicarbazin would have to be consumed to produce toxic effects (EPA 2005). Based on the use pattern of the OvoControl® P and if label instructions are followed, risks to human safety will be low with the primary exposure occurring to those handling and applying the product. Safety procedures required by the label, when followed, will minimize risks to handlers and applicators.

The use of nicarbazin on the aesthetic values of pigeons occurs primarily from the inability of those interested to enjoy viewing, feeding, and photographing pigeons along with knowing pigeons are free-ranging. The aesthetic value of a local pigeon population would likely lessen from a reduction in a population that would result from the use of nicarbazin. As previously mentioned, the rate of population decline would be variable from the use of nicarbazin since effectiveness of the product varies. However,

the rate of decline in a localized pigeon population is likely to occur at a gradual rate compared to other lethal removal programs that target localized pigeon populations. Giunchi et al. (2007) predicted through modeling that a population of 5,000 pigeons would be reduced by half if a 50% reduction in pigeon egg hatch occurred annually over a five-year period. However, damage would continue to occur from those pigeons which could affect the aesthetic value of property and threaten human safety if pigeon populations remain sufficient for extended periods of time. Overall, the aesthetic value of a localized pigeon population would be similar to the use of other lethal methods discussed in the EA since a population decline would occur.

The use of nicarbazin would generally be considered as a humane method of managing local populations of pigeons. Nicarbazin reduces the hatchability of eggs laid by pigeons and appears to have no adverse affects on pigeons consuming bait daily and does not appear to adversely affect those chicks that do hatch from parents fed nicarbazin (Avery et al. 2006, Avery et al. 2008). Nicarbazin has been characterized as a veterinary drug since 1955 by the FDA for use in broiler chickens to treat outbreaks of coccidiosis with no apparent ill effects to chickens. Based on current information, the use of nicarbazin would generally be considered humane based on current research.

Overall, the use of nicarbazin would have no effect on non-target wildlife that may consume bait or consume pigeons that have consumed bait, will not adversely affect human safety given the use restriction of the product that are found on the label, which if followed, will minimize human exposure to the product, will not adversely affect the aesthetic values of pigeons since pigeons are common in the State and the population decline would be gradual, and the product would likely be considered humane since only the hatching rate of eggs laid would be reduced after consumption with no apparent adverse affects to the pigeons consuming bait or the chicks that do hatch from eggs. WS' potential use of OvoControl® P under the proposed action would not adversely affect any aspect of the issues analyzed in detail in the EA and would allow for additional methods to be available for use in an integrated approach to managing damage caused by pigeons. If wide-scale use of nicarbazin is planned by WS, further analysis pursuant to the National Environmental Policy Act would likely be warranted and would occur to the degree necessary to evaluate the planned use of the product.

XII. ANALYSIS

WS has reviewed the potential environmental impacts and the scope of analysis contained in the EA. The EA and the associated Decision/FONSI determined that activities conducted pursuant to and within the scope of analyses would not have significant impacts on the quality of the human environment. After review of the EA, the associated Decision/FONSI, and information contained in this summary report, WS has determined that the environmental impacts on the quality of the human environment from those activities conducted pursuant to the EA and its Decision/FONSI will continue to be insignificant and that no substantive changes in the analyses are necessary.

WS' pigeon, starling, sparrow, and blackbird damage management activities in Maine, based on the information found within this report, fall within the scope of analysis in the EA. No substantive changes have occurred in activities conducted or methods used since implementing the EA decision during the reporting period. Program activities have not changed from those described and analyzed in the EA. The EA discusses program procedures, protection measures, and mitigations that the WS program implements during direct control activities to provide an assurance of quality and consideration for environmental impacts.

XIII. DECISION AND RATIONALE

I have carefully reviewed the EA, the comments received during the public involvement process, the 2002 Decision/FONSI, and the information in this summary and new Decision document. I find the proposed program to be environmentally acceptable, addressing the issues and needs while balancing the environmental concerns of management agencies, landowners, advocacy groups, and the public. The analyses in the EA adequately addresses the identified issues which reasonably confirm that no significant impact, individually or cumulatively, to wildlife populations or the quality of the human environment are likely to occur from the proposed action, nor does the proposed action constitute a major federal action that would warrant the development of an EIS. Therefore, the analysis in the EA remains valid and does not warrant the completion of an EIS.

Based on the EA, the issues identified are best addressed by continuing Alternative 1 (Proposed Action/No Action) and applying the associated mitigation measures discussed in Chapter 3 of the EA. Alternative 1 successfully addresses (1) pigeon, starling, sparrow, and blackbird damage management using a combination of the most effective methods and does not adversely impact the environment, property, and/or non-target species, including T&E species; (2) it offers the greatest chance at maximizing effectiveness and benefits to resource owners and managers while minimizing cumulative impacts on the quality of the human environment that might result from the program's effect on target and non-target species' populations; (3) it presents the greatest chance of maximizing net benefits while minimizing adverse impacts to public health and safety; and (4) it offers a balanced approach to the issues of humaneness and aesthetics when all facets of those issues are considered. Further analysis would be triggered if changes occur that broaden the scope of WS' damage management activities, that affect the natural or human environment, or from the issuance of new environmental regulations.

The rationale for my decision is based on several considerations. This decision takes into account public comments, social/political and economic concerns, public health and safety, the best available science, and program activities conducted since the selected alternative was implemented. The foremost considerations are that: 1) pigeon, starling, sparrow, and blackbird damage management will only be conducted by WS at the request of landowners/managers, 2) management actions are consistent with applicable laws, regulations, policies and orders, and 3) no adverse impacts to the environment were identified in the analysis. As a part of this new Decision, the WS program in Maine will continue to provide effective and practical technical assistance and direct management techniques that reduce damage.


The WS program in Maine will implement the proposed action in compliance with all applicable standard operating procedures and minimization measures described in Chapter 3 of the EA (USDA 2002). If no substantive issues or alternatives are identified after publication of a legal notice making the EA, the 2002 Decision/FONSI, and this Decision available to the public for review and comment, this new Decision will take effect at the close of the public notification period. New issues or alternatives raised after publication of public notices will be fully considered to determine whether the EA and this Decision should be revisited and, if appropriate, revised, or if a Notice of Intent to prepare an EIS should be issued.

FINDING OF NO SIGNIFICANT IMPACT

The analysis in the EA, the 2002 Decision/FONSI, and this summary report indicates that there will not be a significant impact, individually or cumulatively, on the quality of the human environment as a result of this proposed action. I agree with this conclusion and therefore find that an EIS need not be prepared. This determination is based on the following factors:

1. Pigeon, starling, house sparrow, and blackbird damage management, as conducted by WS in Maine, is not regional or national in scope.

2. The proposed action would pose minimal risk to public health and safety. Risks to the public from WS' methods were determined to be low in a formal risk assessment (USDA 1997).
3. There are no unique characteristics such as park lands, prime farm lands, wetlands, wild and scenic areas, or ecologically critical areas that would be significantly affected. Built-in mitigation measures that are part of WS' standard operating procedures and adherence to laws and regulations will further ensure that WS' activities do not harm the environment.
4. The effects on the quality of the human environment are not highly controversial. Although there is some opposition to wildlife damage management, this action is not highly controversial in terms of size, nature, or effect.
5. Based on the analysis documented in the EA, the 2002 Decision/FONSI, and the accompanying administrative file, the effects of the proposed damage management program on the human environment would not be significant. The effects of the proposed activities are not highly uncertain and do not involve unique or unknown risks.
6. The proposed action would not establish a precedent for any future action with significant effects.
7. No significant cumulative effects were identified through the assessment in the EA, the 2002 Decision/FONSI, and this summary report. The number of pigeons, starlings, house sparrows, blackbirds, ravens, and crows killed by WS, when added to the total known take of those species, would fall within population management objectives supported by the Maine Department of Inland Fisheries and Wildlife and the U.S. Fish and Wildlife Service. The EA discussed cumulative effects of WS' activities on target and non-target species populations and concluded that such impacts were not significant for this or other anticipated actions to be implemented or planned within the State.
8. The proposed activities would not affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places, nor would they likely cause any loss or destruction of significant scientific, cultural, or historical resources.
9. WS has determined that the proposed project would not adversely affect any federal or Maine State listed threatened or endangered species.
10. The proposed action would be in compliance with all federal, state, and local laws.



Charles S. Brown, Director-Eastern Region
USDA/APHIS/WS
Raleigh, North Carolina

Date

7/1/09

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